

Application Serial No: 10/644,549
In reply to Office Action of 25 October 2005

Attorney Docket No. 84454

REMARKS / ARGUMENTS

At the outset, Applicants are pleased to note that the Examiner considers the subject matter of claim 9 to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 1, 2 and 4-10 are currently pending in the application. Claim 10 is allowed. Claims 1, 2, and 4-8 are rejected. Claim 9 is objected to. Claims 11-14 are newly added by this response.

The Examiner rejected claims 1, 2 and 4-8 under 35 U.S.C. 103(a) as being unpatentable over Coutandin et al (U.S. Patent No. 5,030,321) in view of Mead (ref A: U.S. Patent No. 4,195,045).

The Examiner states with respect to claims 1, 4, 6 and 7, Coutandin et al. (figure 2) disclose an optical fiber coupler for connecting a first fiber optic element to a second fiber optic element, the coupler comprising a first fiber optic element (5) extending in a first direction whereby to position a free end of the first fiber optic element (5) in a selected zone (11); a second fiber optic element (6) extending into the selected zone (11) from a direction generally opposite to the first direction to position a free end of the second fiber optic element (6) in the selected zone (11) and proximate the first fiber optic element free end; and a cured optical grade epoxy resin body (12) comprising the selected zone (11) and enveloping the free ends of

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the fiber optic elements (5 and 6); whereby to provide physical and optical connection between the first and second fiber optic elements (see figure 2).

The Examiner states Coutandin et al. do not disclose the body is provided with a cone-shaped end and a generally planar base end.

The Examiner states however, Mead (figure 6) discloses the body is provided with a cone-shaped end and a generally planar base end (see the abstract and column 1, lines 25-32). The Examiner also states therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the body of Coutandin's device to have the cone-shaped end and a generally planar base end (in accordance with the teaching of Mead) for the purpose of facilitating the manufacture of the optical fiber coupler and obtaining more protection for the optical fiber coupler.

The Examiner states with respect to claim 2, Coutandin et al. (figure 2) disclose the coupler, wherein the first fiber optic element comprises a single fiber optic strand (5) and the second fiber optic element comprises a plurality of fiber optic strands (6 and 7).

The Examiner states with respect to claim 5, Coutandin et al. (figure 2) disclose the coupler, wherein the second fiber optic element comprises a plurality of fiber optic strands (6, 7)

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extending into the body through the base end (see figure 2).

The Examiner states with respect to claim 8, Coutandin et al. (figure 2 and column 2, lines 43-51) disclose the coupler, wherein at least one of the first and second fiber optic elements comprises a plurality of fiber optic strands (6 and 7), the positions to which the free ends of the first and second elements extend being spaced apart by a distance (see figure 2) allowing a sufficient extent of diffusion of light in the optical grade epoxy resin (12) there between to couple light between each strand of one of the first and second fiber optic elements with each strand of the other of the elements.

The Examiner objected to claim 9 as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The Examiner states the prior art of record fails to disclose or reasonably suggest the coupler, wherein the plurality of fiber optic strands is arranged in a ring-like pattern about a central axis of the cone-shaped end of the body as recited in claim 9.

The Examiner has allowed claim 10.

The Examiner states the prior art of record fails to disclose or reasonably suggest a method for connecting a first fiber optic element to a second fiber optic element comprising the steps of providing a rigid body; coating outer surfaces of the body with a

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layer of mold making wax; separating the body from the wax to provide a hollow wax housing having a cone-shaped end and an open base end, in combination with the other limitations of claim 10.

These rejections and objections are respectfully traversed in view of these amendments and remarks.

With regard to Examiners rejection of claim 1, Applicants argue that the body disclosed in FIG. 6 of the Mead patent does not perform the same function as the "cured optical grade epoxy resin body with a cone-shaped end and a generally planar base end." According to Mead, "FIG. 6 shows the sleeve C with the resin body and the fiber F extending through it, and with a cleavage formed by the knife edge member G." (Col. 4 Lines 39-43). Applicants argue that the resin is not described as optical grade epoxy resin. Applicants also argue that the resin does not serve as the physical coupler of two separate fiber optic elements. In Mead there is only a single fiber F encased in the resin. Whereas in Applicants' application the optical grade epoxy resin body couples more than one fiber optic element. To establish prima facie obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974).

Applicants respectfully suggest that, in light of the above argument, claim 1 should now be allowed. Applicants also suggest

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that claims 2-9 are now also allowable through dependency upon claim 1.

Applicants have added new independent claim 11 which contains the subject matter of claim 9 rewritten in independent form including all of the limitations of the base claim and any intervening claims in strict compliance with the requirements of the Examiner. Applicants have added dependant claims 12-14 adding additional limitations to their invention to further distinguish it from the prior art.

Applicants respectfully suggest that claim 11 should be allowed whereas it is in compliance with the requirements of the Examiner. Applicants also suggest that claims 12-14 are also allowable through dependency upon claim 11.

Applicants respectfully suggest in view of these remarks that all grounds for rejection and objection have been removed by the foregoing amendments. Applicants state that no new matter has been added by this amendment, and that all of the remaining claims in the application are now believed to be in condition for allowance. Reconsideration and allowance of this application are therefore earnestly solicited.

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The Examiner is invited to telephone Jean-Paul A. Nasser, Attorney for Applicants, at 401-832-4736 if, in the opinion of the Examiner, such a telephone call would serve to expedite the prosecution of the subject patent application.

Respectfully submitted,

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